

14/PRTS

10/500166

DT11 Rec'd PCT/PTO 23 JUN 2004

1

## DOUBLE-SIDED IRONING PLATE

### Technical Field

The present invention relates to an ironing plate, and in particular to  
5 a double-sided ironing plate in which it is possible to use double sides in one  
ironing plate, and an ironing is performed on front and back sides in a state  
that a certain suit of clothes is placed, and there is provided a 3-dimensinal  
ironing surface, so that a certain curved portion such as a hip portion can be  
effectively ironed.

10

### Background Art

Generally, as shown in Figure 1, a conventional ironing plate 100  
includes a plane ironing surface 104 fabricated with a certain length wherein  
a certain ironing object is placed on an upper surface of the same, and an  
15 inclination part 16 formed at one end of the ironing surface 104 at a certain  
inclination angle for thereby effectively ironing a portion of sleeve. Foldable  
legs 102 are provided on a back surface of the ironing surface 104.

In the conventional ironing plate 100, there are the following  
disadvantages when ironing clothes.

20 In the case that a Y-shirt is ironed, the front surface and back surface  
of the Y-shirt are arranged on the ironing surface 104 for ironing the front and

back surfaces of the Y-shirt. Therefore, it takes a long time for ironing. In addition, in the case that the previously ironed portion is overlapped with a non-ironed portion, the ironed portion may be wrinkled. In this case, the wrinkled portions should be re-ironed.

5           In addition, in the case that a trousers is ironed, a certain problem occurs when a front side having a lot of wrinkles is ironed for the reason that the conventional ironing plate has a plane ironing surface 104, but the front side, hip portion and pocket portion are actually protruded.

          Therefore, there are a lot of inconveniences for ironing the front sides  
10 of the trousers having wrinkles.

### **Disclosure of Invention**

          Accordingly, it is an object of the present invention to provide a double-sided ironing plate capable of overcoming the problems encountered  
15 in the conventional art.

          It is another object of the present invention to provide a double-sided ironing plate in which double sides are used for ironing in one ironing plate, and a front side or a back side as well as a curve portion of clothes is well ironed in a state that a suit of clothes is inputted into an ironing plate for  
20 thereby preventing a certain wrinkle, and it is possible to enhance an ironing efficiency in such a manner that a certain ironing part is provided based on a

certain portion in an upper garment, a sleeve of upper garment, and a lower garment.

To achieve the above objects, in an ironing plate designed to iron clothes, there is provided a double-sided ironing plate, comprising a sleeve  
5 part having a rectangular cross section wherein a sleeve part of clothes is putted onto the same; a shirt part that is integrally connected with the sleeve part and has a human body shaped cross section so that front and back surfaces of clothes are ironed in a state that an upper garment is putted onto the ironing plate; and a lower garment part that is connected with the shirt  
10 part and is formed in a dovetail shape for thereby performing an ironing operation in a state that a lower garment is putted on, wherein one surface of the sleeve part, shirt part and lower garment part forming the ironing part is plane, and the back surface is formed of a 3D curved surface.

In the present invention, the ironing plate includes a leg part capable  
15 of maintaining an inverted state of one surface and a back surface of the ironing plate so that a double surface ironing is achieved by changing the front and back surfaces in a state that clothes are putted on, wherein the leg part includes a support frame; a plurality of legs wherein one end of each of the same is connected with the support frame; and a support groove and an  
20 insertion groove formed in the ironing plate in such a manner that the legs

are crossed from each other, and a hinge portion is formed at the crossing portion, and the other end of each of the legs is positioned.

### **Brief Description of Drawings**

5           The present invention will become better understood with reference to the accompanying drawings which are given only by way of illustration and thus are not limitative of the present invention, wherein;

Figure 1 is a perspective view illustrating a conventional ironing plate;

Figure 2 is a perspective view illustrating a plane part of a double-  
10       sided ironing plate according to a first embodiment of the present invention;

Figure 3 is a perspective view illustrating a curved part of a double-  
sided ironing plate according to a first embodiment of the present invention;

Figure 4 is a perspective view illustrating a state that a sleeve part is  
inserted onto a double-sided ironing plate according to a first embodiment of  
15       the present invention;

Figure 5 is a perspective view illustrating a state that an upper  
garment of clothes is worn onto a double-sided ironing plate according to a  
first embodiment of the present invention;

Figure 6 is a perspective view illustrating a state that a lower garment  
20       is worn onto a double-sided ironing plate according to a first embodiment of

the present invention;

Figure 7 is a view illustrating a state that a plane part of a double-sided ironing plate is used according to a first embodiment of the present invention;

5        Figure 8 is a view illustrating a state that a curved part of a double-sided ironing plate is used according to a first embodiment of the present invention;

Figure 9 is a perspective view illustrating a double-sided ironing plate according to a second embodiment of the present invention;

10        Figure 10 is a perspective view illustrating a support part of a double-sided ironing plate according to a second embodiment of the present invention;

Figure 11 is a cross sectional view of Figure 9;

15        Figure 12 is a cross sectional view illustrating an example of a support part of Figure 10;

Figure 13 is a perspective view illustrating a leg part of a double-sided ironing plate according to a second embodiment of the present invention;

Figures 14 through 16 are views illustrating an operation state of an ironing plate according to a second embodiment of the present invention;

20        Figures 17 through 20 are views illustrating a use state of an ironing

plate according to a second embodiment of the present invention; and

Figure 21 is a cross sectional view illustrating a sleeve part of a double-sided ironing plate according to a second embodiment of the present invention.

5

### **Best Mode for Carrying Out the Invention**

A first embodiment of the present invention will be described with reference to the accompanying drawings. The same reference numerals of the drawings correspond to the same elements having the same functions.

10 As shown in Figures 2 and 3, the double-sided ironing plate 2 is designed to perform an ironing operation using double sides. One surface of the ironing plate 2 is formed of a plane surface 2a, and the other surface of the same is formed of a curved surface 2b having a three-dimension protrusion.

15 The ironing plate 2 has an ironing part having various purposes of use. A sleeve part 4 is provided at one end of the ironing plate 2 for ironing sleeves of Y-shirt, etc.

The sleeve part 4 has a rectangular cross section wherein a sleeve 6 of clothes is inserted onto the same. As shown in Figure 4, in a state that the  
20 sleeve 6 is inserted, an ironing operation is performed.

In addition, a shirt part 8 is formed at an intermediate portion of the ironing plate 2 connected with the sleeve part 4, so that an upper garment such as Y-shirt, etc. is worn. As shown in Figure 5, it is possible to iron a suit of clothes like the Y-shirt 10 is worn to a person.

5           At this time, the back surface of the upper garment is positioned at the plane surface 2a of the ironing plate 2, and the front surface of the upper garment is positioned at the curved portion 2b of the ironing plate 2.

In addition, a lower garment part 12 of a dovetail shape is formed in a lower side of the ironing plate 2 wherein a lower garment such as trousers is worn. As shown in Figure 6, the trousers are worn into the lower garment part 12 for thereby ironing the lower garment.

10

Since the curved surface 2b of the back surface of the ironing plate 2 to which the trousers 14 are worn are protruded, when ironing the front side of the trousers 14, it is possible to easily iron. In addition, the backside and lateral side of the trousers 14 are effectively ironed.

15

In the double-sided ironing plate 2 according to the present invention, it is possible to iron the front and back surfaces of the clothes using only the ironing plate 2. In another embodiment of the present invention, as shown in Figure 7, the leg part 18 may be provided for more conveniently ironing the front and back surfaces.

20

In the leg part 18, there is provided a support frame 20. A plurality of legs 22 are provided on the upper side of the support frame 20 wherein one end of the support frame 20 is rotatably engaged with the legs 22, respectively. The legs 22 are crossed from each other, and the crossing point is hinged.

The other ends of the legs 22 are supported by the support grooves 2c and insertion grooves 2d formed in the ironing plate 2, so that the front and back surfaces of the ironing plate 2 are supported.

The use of the double-sided ironing plate 2 according to the first embodiment of the present invention will be described.

When ironing an upper garment, as shown in Figure 7, the upper garment 10 is inserted into the shirt part 8 of the ironing plate 2 like it is worn thereto, and the plane surface 2a or curved surface 2b of the ironing plate 2 is upwardly faced and are supported by the leg part 18 based on a user's selection.

In a state that the plane surface 2a of the ironing sand 2 is upwardly faced, the user first irons the back surface of the upper garment 10 positioned at the plane surface 2a of the ironing plate 2.

After the user completes ironing the back surface positioned at the plane surface 2a, the user maintains a state that the upper garment 10 is



inserted. In this state, the curved surface 2b that is a back surface of the ironing plate 2 is inverted and is upwardly faced. At this time, one end of the legs 22 is placed on the support groove 2c of the ironing plate 2, and the other end of the same is inserted into the insertion groove 2d of the ironing plate 2, for thereby fixing the ironing plate 2.

In the method for engaging the ironing plate 2 to the leg part 18, the other ends 22a of the legs 22 are inserted into the insertion groove 2d of the ironing plate 2, and the other end 22b of the ironing plate 2 is placed on the support groove 2c.

As shown in Figure 8, in a state that the curved surface 2b of the ironing plate 2 is positioned on the upper side, the front side of the upper garment is ironed, so that the ironing of the upper garment 10 of the leg portions is completed.

In addition, the lower garment such as trousers, etc. is ironed in the state shown in Figure 6. Namely, the front side of the trousers 14 is positioned at the curved surface 2b of the ironing plate 2, so that it is possible to effectively iron the front side of the trousers 14 having wrinkles through the curved surface 2b protruded.

It is possible to effectively iron the lateral surface and hip portion of the trousers 14 by turning the trousers 14 inserted into the lower garment

part 12.

In an ironing plate for ironing clothes of the double-sided ironing plate according to a second embodiment of the present invention, there is provided a double-sided ironing plate of which upper and lower surfaces are used for ironing. A support part is adapted to support the ironing plate. There is provided a support part connected with one end of the support part for thereby supporting one end of the ironing plate wherein the ironing plate is tiltable in the upper and lower directions and is rotatable in the left and right direction. Here, the support part includes a stay portion formed at one end of the support part, and a stay port formed at one end of the ironing plate wherein the stay portion is received thereinto. A first hinge part is formed at the support part, so that the ironing plate is tiltable in the upper and lower directions.

In addition, the support part includes a circular protrusion part formed at one end of the support part, and a receiving groove formed at one end of the ironing plate wherein the protrusion part is received thereinto. The first hinge part is preferably formed in the support part so that the ironing plate is tiltable in the upper and lower directions. The support part preferably includes a pair of first legs provided at a certain interval wherein the support part is formed at one end of the same, and a pair of second legs provided between

the first legs and engaged by a second hinge wherein one end of each of the same supports the ironing plate. The ironing plate includes a shirt part that has a human body shaped cross section wherein an upper garment is worn, and a back surface is plane, and an upper surface is curved, a sleeve part  
5 that is connected with one end of the shirt part wherein a sleeve portion of a suit of clothes is inserted for helping ironing, and a back surface is plane, and an upper surface is curved, and a lower garment part that is connected with the other end of the shirt part wherein a back surface is plane for thereby performing ironing in a state that a lower garment is inserted, and an upper  
10 surface is curved.

In addition, an insertion groove is preferably inserted into the interior of one end of the shirt part, so that the sleeve part is inserted. A holder is provided in the lower garment part for fixing the lower garment inserted. The holder is preferably tongs. In the present invention, the double sides are used,  
15 and the front and back sides as well as the curved portions of clothes are well ironed based on the ironing surfaces 3D-formed along the curves of human body in a state that clothes are inserted to the ironing plate. In the present invention, wrinkles are not formed. Furthermore, there are provided ironing portions designed to be matched with the portions of upper garment,  
20 sleeves of clothes, and lower garment, so that an ironing efficiency is

enhanced, and a double-sided ironing is implemented.

The second embodiment of the present invention will be described.

As shown in Figure 9, in the double-sided ironing plate 200 according to the present invention, there is provided a double-sided ironing plate 300 of which upper and lower surfaces may be used for ironing. A support 310 supports the ironing plate 300. A support 320 is adapted to support an end of the ironing plate 300 at one end of the support part 310, so that the ironing plate 300 is tiltable in the upper and lower directions and is rotatable in the left and right directions.

In the ironing plate 300 according to the second embodiment of the present invention like the first embodiment, it is designed to iron using both sides of the ironing plate. The back surface of the ironing plate 300 is formed of a plane 300b, and the upper surface of the same is formed of a curved surface 300a having a 3D curve.

A sleeve part 304 is provided at one end of the ironing plate 300 for ironing sleeves or shoulders of a suit of clothes such as Y-shirt, etc. In the sleeve part 304, the shape of the cross section is a rectangular shape of which an upper side is protruded, so that the sleeves of clothes are inserted. Therefore, in a state that the sleeves are inserted, it is possible to naturally iron based on the shape of the sleeves.

In addition, the sleeve part 304 is designed to perform an ironing operation with respect to a narrow portion such as sleeves or shoulder of clothes.

In addition, the shirt part 308 is formed at the intermediate portion of the ironing plate 300 connected with the sleeve part 304 wherein an upper garment such as Y-shirt is inserted thereinto. The upper garment is inserted into the shirt part 308 like a person wears an upper garment.

At this time, the back surface of the upper garment is positioned at a portion of the plane 300b of the ironing plate 300, and the front surface of the upper garment is positioned at a portion of the curved surface 300a of the ironing plate 300, so that it is possible to iron based on the characteristic of upper garment.

In the other end of the ironing plate 300, a rectangular or dovetail shaped lower garment part 312 is formed, so that a lower garment such as trousers is inserted thereinto. The trousers are inserted into the lower garment part 312 for thereby performing ironing.

Since the curved surface 300a of the upper surface of the ironing plate 300 into which the trousers are inserted is protruded, when ironing a front side of the trousers, it is possible to easily iron. In addition, the backsides of the trousers as well as the lateral sides may be effectively

ironed.

Furthermore, the wrinkles formed in the front side of the trousers may be effectively ironed. In addition, the hip part of the trousers may be effectively ironed through the plane 300b that is a back surface.

5           There is provided a support part 320 in such a manner that the plane 300b of the back surface and the curved surface 300a of the upper surface are rotated in a state that a suit of clothes is inserted in the double-sided ironing plate 200 according to the second embodiment of the present invention in the second embodiment of the present invention.

10           As shown in Figures 10 and 11, there is provided the support part 320 by which the ironing plate 300 is tiltable in the upper and lower directions and is rotatable in the left and right directions.

          The lower garment part 312 is formed based on an engagement of the upper part 312a and the lower part 312b. A stay port 316 is formed at the  
15           end of the engagement.

          A stay 318 formed at one end of a first leg 332 capable of supporting the ironing plate 300 is positioned in the stay port 316.

          Therefore, the user can move the ironing plate 300 in the upper, lower, left and right directions based on the support part 320.

20           Figure 12 is a view illustrating the support part 320 according to

another embodiment of the present invention. A circular protrusion 316 is formed at one end of the first leg 332, and a receiving groove 313 is formed in the lower garment part 312 in which the circular protrusion part 316 is positioned.

5            Figures 13 through 16 are views illustrating the support part 310 capable of supporting the ironing plate 300 of the double-sided ironing plate 200 according to a second embodiment of the present invention. As shown in Figure 10 or 12, the first leg 332 engaged with the first hinge 336 is provided at one end of the ironing plate 300 in cooperation with the support part 320, and the second leg 334 is engaged with the first leg 332 using the second  
10            hinge 338.

            Here, the first leg 332 is provided in pair at a certain interval, and the first legs 332 have a horizontal direction bar 342 for supporting and connecting the same. The second leg 334 is provided between the first legs  
15            332.

            One end of the second legs 334 is connected with the second leg 334 by a third hinge 344, and a hanging bar 346 is provided on the other end of the same for thereby being hung thereon wherein the hanging bar 346 has a plurality of hanging grooves 346a. The first legs 332 and the second legs  
20            334 are connected through the hanging bar 346, so that the ironing plate 300

is stably supported.

A plurality of the hanging grooves 346a formed in the hanging bar 346 are hung on the horizontal direction bar 342 based on a user's selection, so that it is possible to adjust based on the height of user.

5           The operation of the double-sided ironing plate 200 according to the second embodiment of the present invention will be described.

In the state of Figure 9, the user holds a free end of the ironing plate 300 supported by the second leg 334 and then lifts up the ironing plate 300 as shown in Figure 14. At this time, the ironing plate 300 is naturally lifted up  
10           by the support part 320 connected to one end of the first leg 332.

In addition, as the ironing plate 300 is lifted up, the first hinge 336 of the first leg 332 is also tilted.

Thereafter, the lifted-up ironing plate 300 is rotated as shown in Figure 15, so that the upper surface of the curved surface 300a is position-  
15           changed with the back surface of the plane 300b.

In a state that the upper surface and the back surface are position-  
changed, the user holds the other end of the ironing plate 300 as shown in Figure 16, and the ironing plate 300 is supported by the second leg 334. Therefore, the plane 300b is positioned on the upper side, and the curved  
20           surface 300a is positioned in the lower side in the ironing plate 300.



In the above state, the double-sided ironing plate 200 according to the second embodiment of the present invention includes the sleeve part 304, the shirt part 308, the lower garment part 312 that operate based on the characteristics of corresponding clothes with respect to the sleeve part and shoulder part of Y-shirt, and the upper garment such as Y-shirt, and trousers.

In the case of sleeve, as shown in Figure 17, in a state that the sleeve 500 is inserted into the sleeve part 304, the ironing operation is performed. Since the sleeve part 304 is formed of a curved surface in a rounded shape formed based on the shape of the sleeve 500, it is possible to effectively iron the sleeve 500.

Furthermore, it is possible to effectively iron the narrow portions such as shoulder portions.

In the case that the upper garment is ironed, as shown in Figure 18, the upper garment 520 is worn to the shirt part 308 of the ironing sand 300 like a person wears clothes, and the plane 300b or the curved surface 300a of the ironing plate 300 is upwardly faced based on the user's selection.

In a state that the plane 300a that is one surface of the ironing plate 300 is upwardly faced, the user first irons the back surface of the upper garment 520 positioned at the plane 300b of the ironing plate 300.

After the user irons the back surface of the plane 300b, the user

maintains a state that the upper garment 520 is worn. In this state, the user inverts the ironing plate 300 in such a manner that the curved surface 300 that is a back surface of the ironing plate 300 is upwardly faced, so that the curved surface 300a is ironed.

5           In the case of the lower garment such as trousers, as shown in Figures 19 and 20, the hip part and leg part are separately ironed. First, when ironing the hip part, the trousers 530 are putted onto the lower garment part 312 of the ironing plate 300, and the ironing is performed.

          At this time, it is possible to iron the portions such as hip part based  
10       on the shape of clothes through the protruded and curved surface 300a of the lower garment part 312.

          When ironing the trousers 530, there is provided a holder 350 in the lower garment part 312 for holding the leg part 530a of the trousers 530. The holder 350 is tongs generally found in our surroundings.

15           As shown in Figure 20, when ironing the leg part 530a of the trousers 530, the plane 300b of the ironing plate 300 is upwardly faced, and the leg part 530a of the trousers 530 is placed on the plane 300b, and the leg part 530a of the trousers 530 is held using the tongs 352.

          At this time, a belt part 530b of the trousers 530 is positioned at the  
20       sleeve part 304.

In a state that the leg part 530a is caught by the tongs 352, the user irons the leg part 530a in a state that the belt part 530a is pulled in a state that the user holds the belt part 530b of the trousers 530.

In the above state, in a state that the trousers 530 are putted on, the  
5 front sides of the trousers 530 having the wrinkles are ironed through the curved surface 300a protruded.

In addition, it is possible to effectively iron the lateral sides and hip parts of the trousers 530 by turning the trousers 530 putted onto the lower garment part 312. The leg part 530a is ironed in a state that the plane 300b is  
10 upwardly faced.

In a state that the leg part 530a of the trousers 530 is caught by the tongs 352, since the user's one hand that does not catch the ironing machine is idle, the portions of the wrinkles are pulled using the idle hand for thereby enhancing an efficient ironing.

15 Figure 21 is a view illustrating the construction that an insertion groove 308a is formed in the shirt part 308 so that the sleeve part 304 of the double-sided ironing plate 200 according to the second embodiment of the present invention is used if necessary. When ironing the sleeves 500, the sleeve part 304 is extended and exposed to the outside.

20 In the case that the sleeve part 304 is not used, the sleeve part 304

is pushed into the insertion groove 308a formed in the shirt part 308 so that the sleeve part 304 is not exposed to the outside.

In the double-sided ironing plate according to the present invention, the double surfaces are used for ironing. In the present invention, it is possible to effectively iron the front and back sides as well as the curved surfaces of clothes such as back or hip portion in a state that the clothes are tightly putted onto the ironing plate based on the ironing surface 3D-formed based on the curves of human body. Therefore, the wrinkles are not formed, and the ironing efficiency is enhanced.

The present invention is not limited to the above embodiment. As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.